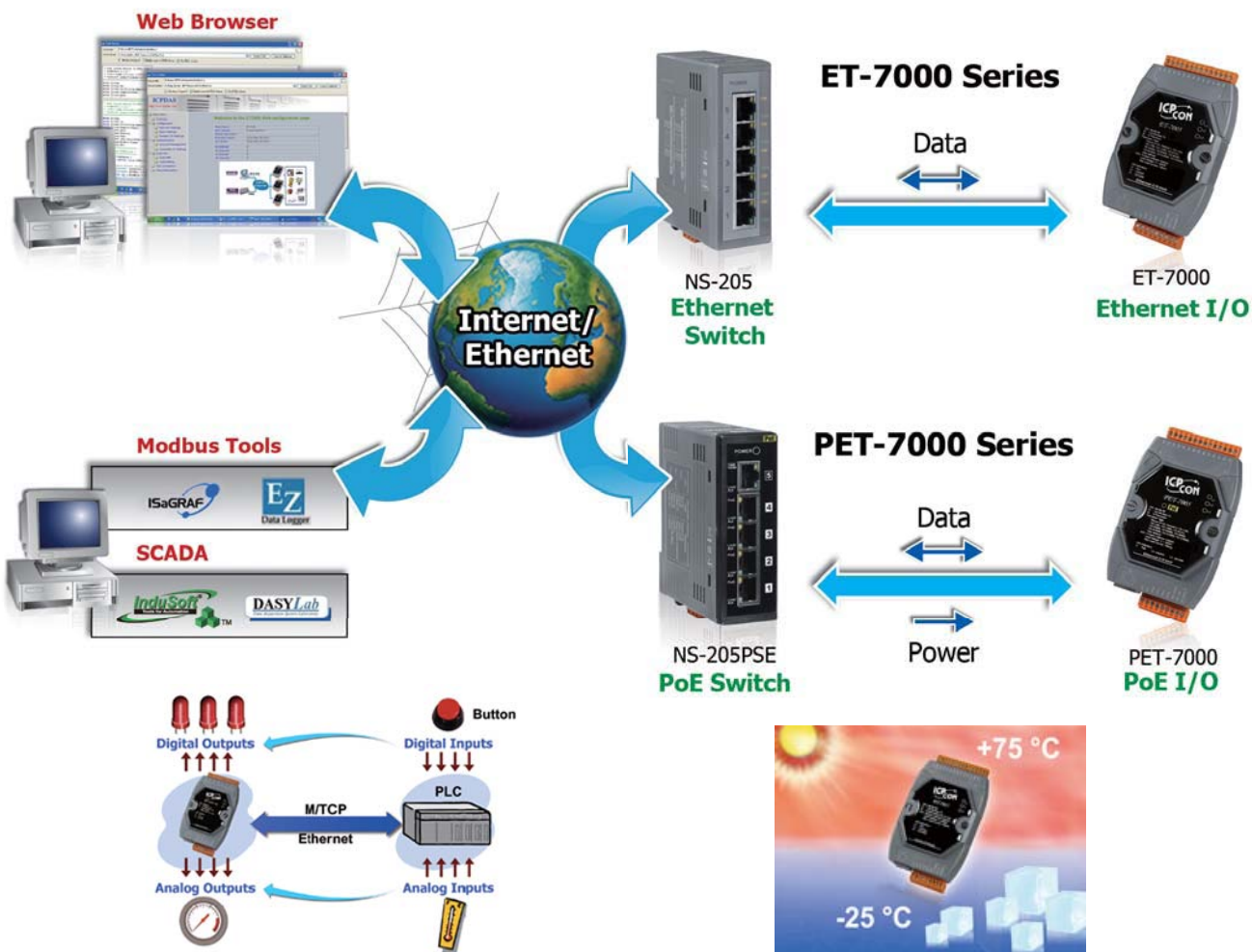


3.3. ET-7000/PET-7000 Series (Web based)

3

Ethernet I/O Modules

• Selection Guide



3

ET-7000/PET-7000 Series (Web based)

Analog Input Model

Model Name	AI			DO		
	Channel	Voltage and Current Input	Sensor Input	Channel	Type	Sink/Source
ET-7005 PET-7005	8	-	Thermistor	4	Open Collector	Sink
ET-7015 PET-7015	7	-	RTD: Pt100, Pt1000, Ni120, Cu100, Cu1000	-	-	-
ET-7017 PET-7017	8	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA, 4 ~ 20mA	-	4	Open Collector	Sink
ET-7017-10 PET-7017-10	10/20	+/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA	-	-	-	-
ET-7018Z PET-7018Z	10	+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, +/-2.5 V +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA	Thermocouple: J, K, T, E, R, S, B, N, C, L, M, LDIN43710	6	Open Collector	Sink
ET-7019 PET-7019	8	+/-15 mV, +/-50 mV, +/-100 mV, +/-150 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA	Thermocouple: J, K, T, E, R, S, B, N, C, L, M, LDIN43710	4	Open Collector	Sink

Note: We recommend to choose ET-7018Z/PET-7018Z and ET-7019Z/PET-7019Z for accurate thermocouple measurement.



Multifunction I/O

Model Name	AI			AO		DI/Counter		DO	
	Channel	Voltage and Current Input	Sensor Input	Channel	Voltage and Current Output	Channel	Type	Channel	Type
ET-7002 PET-7002	3	+/- 150 mV, +/- 500 mV, +/- 1 V, +/- 5 V, +/-10 V, + 0 mA ~ + 20 mA, +/- 20 mA, 4 ~ 20 mA	-	-	-	6	Wet (Sink,Source)	3	Power Relay (Form A)
ET-7016 PET-7016	2	+/- 15 mV, +/- 50 mV, +/- 100 mV, +/- 500 mV, +/- 1 V, +/- 2.5 V, 0 ~ 20 mA, +/- 20 mA, 4 ~ 20mA	Strain Gague, Load Cell, Full-Bridge, Half-Bridge, Quarter-Bridge	1	0 ~ 10V	2	Wet (Sink,Source)	2	Open Collector (Sink)
ET-7026 PET-7026	6	+/- 500 mV, +/- 1 V, +/- 5 V, +/-10 V, 0 ~ 20 mA, +/- 20 mA, 4 ~ 20mA	-	2	0 ~ 5 V, +/- 5 V, 0 ~ 10 V, +/- 10 V, 0 ~ 20 mA, 4 ~ 20 mA	2	Dry (Source), Wet (Sink,Source)	2	Open Collector (Sink)

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Ethernet I/O Modules



Digital I/O

Model Name	DI/Counter			DO			
	Channel	Type	Sink/Source	Channel	Type	Sink/Source	Max. Load Current @ 25°C
ET-7042 PET-7042	-	-	-	16	Open Collector	Sink	100 mA/channel
ET-7044 PET-7044	8	Wet	Sink, Source	8	Open Collector	Sink	300 mA/channel
ET-7050 PET-7050	12	Wet	Sink, Source	6	Open Collector	Sink	100 mA/channel
ET-7051 PET-7051	16	Wet	Sink, Source	-	-	-	-
ET-7052 PET-7052	8	Wet	Sink, Source	8	Open Collector	Source	650 mA/channel
ET-7053 PET-7053	16	Dry	Source	-	-	-	-

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PET-7000/PET-7000 Series (Web based)



Relay Output & Digital Input

Model Name	Relay Output				DI/Counter		
	Channel	Relay	Type	Max. Load Current @ 25°C	Channel	Type	Sink/Source
ET-7060 PET-7060	6	Power Relay	Form A (SPST N.O.)	5.0 A/channel	6	Wet	Sink, Source
ET-7065 PET-7065	6	PhotoMOS Relay	Form A (SPST N.O.)	1.0 A/channel	6	Wet	Sink, Source
ET-7066 PET-7066	8	PhotoMOS Relay	Form A (SPST N.O.)	1.0 A/channel	-	-	-
ET-7067 PET-7067	8	Power Relay	Form A (SPST N.O.)	5.0 A/channel	-	-	-



Multifunction Module

Features

- PoE and Regular Ethernet Options
- Built-In Web Server
- Web HMI
- Modbus/TCP, Modbus/UDP Protocol
- Communication Security
- Dual Watchdog
- Wide Operating Temperature Range: -25 °C ~ +75 °C
- I/O Pair Connection
- Built-In I/O
 - AI: 6 Channels
 - AO: 2 Channels
 - DI/Counter: 2 Channels
 - DO: 2 Channels

Introduction

The ET-7000/PET-7000, a web-based Ethernet I/O module, features a built-in web server which allows configuration, I/O monitoring and I/O control by simply using a regular web browser. Remote control is as easy as surfing the Internet.

Besides, with the web HMI function, no more programming or HTML skills are required; creating dynamic and attractive web pages for I/O monitoring and I/O control would be fun to engineers ever after. The ET-7000/PET-7000 offers easy and safe access for users from anytime and anywhere! In addition, the ET-7000/PET-7000 also supports Modbus/TCP protocol that makes perfect integration to SCADA software.

Furthermore, PET-7000 features "PoE" that not only data but also power is carried through an Ethernet cable. This feature makes installation of PET-7000 a piece of cake. Imagine that no more unnecessary wires, only an Ethernet cable takes care of everything in the field.

The ET-7026/PET-7026 is a multi-function module, there are 6-channel analog inputs, 2-channel analog output, 2-channel digital inputs and 2-channel digital outputs module. It provides programmable input range on all analog inputs (+/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0~20 mA and 4~20 mA), analog outputs are 12 bit with +/-5 V, +/-10 V, 0~20 mA and 4~20 mA and digital output can be set alarm output. Each analog input is allowed to configure an individual range and has 240 V_{rms} high overvoltage protection. Jumper selectable for voltage or current of inputs/outputs

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.

System Specifications

Models	ET-7026	PET-7026
Software		
Built-In Web Server	Yes	
Web HMI	Yes	
I/O Pair Connection	Yes	
Communication		
Ethernet Port	10/100 Base-TX with Auto MDI/MDI-X	
Protocol	Modbus/TCP, Modbus/UDP	
Security	ID, Password and IP Filter	
Dual Watchdog	Yes, Module (0.8 seconds), Communication (Programmable)	
LED Indicators		
L1 (System Running)	Yes	
L2 (Ethernet Link/Act)	Yes	
L3 (Ethernet 10/100 M Speed)	Yes	
PoE Power	-	Yes
2 Way Isolation		
Ethernet	1500 V _{dc}	-
I/O	2500 V _{dc}	2500 V _{dc}
EMS Protection		
ESD (IEC 61000-4-2)	4 kV Contact for Each Terminal and 8 kV Air for Random Point	
EFT (IEC 61000-4-4)	+/-4 kV for Power	
Power Requirements		
Reverse Polarity Protection	Yes	
Powered from Terminal Block	Yes, 10 ~ 30 V _{dc}	Yes, 12 ~ 48 V _{dc}
Powered from PoE	-	Yes, IEEE 802.3af, Class1
Consumption	3.1 W	4.2 W
Mechanical		
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	
Environment		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-30 °C ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

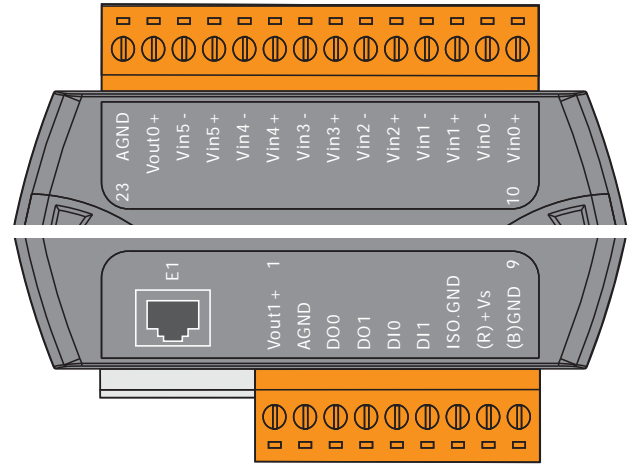
I/O Specifications

Analog Input		
Input Channels	6 (Differential)	
Input Type	+/- 500 mV, +/- 1V, +/- 5 V, +/-10 V + 0 mA ~ + 20 mA, +/- 20 mA, +/- 20 mA (Jumper Selectable)	
Individual Channel Configuration	Yes	
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Sampling Rate	Normal Mode	10 Samples/Sec. (Total)
	Fast Mode	60 Samples/Sec. (Total)
Accuracy	Normal Mode	+/-0.1%
	Fast Mode	+/-0.5% or better
Zero Drift	+/-20 μ V/ $^{\circ}$ C	
Span Drift	+/-25 ppm/ $^{\circ}$ C	
Oversvoltage Protection	240 V_{rms}	
Input Impedance	2 M Ω	
Common Mode Rejection	86 dB Min.	
Normal Mode Rejection	100 dB	
Analog Output		
Output Channels	2	
Output Type	+ 0 V_{DC} ~ + 5 V_{DC} , +/- 5 V_{DC} , + 0 V_{DC} ~ + 10 V_{DC} , +/- 10 V_{DC} , + 0 mA ~ + 20 mA, + 4 mA ~ + 20 mA (Jumper Selectable)	
Individual Channel Configuration	Yes	
Resolution	12-bit	
Accuracy	+/- 0.1% of FSR	
Voltage Output Capability	20 mA @ 10 V	
Current Load Resistance	500 Ω	
Open Wire Detection	Yes, for 4 ~ 20 mA only	
Power-on Value	Yes, Programmable	
Safe Value	Yes, Programmable	
Digital Input/Counter		
Input Channels	2	
Dry Contact (Source)	On Voltage Level	Close to GND
	Off Voltage Level	Open
	Effective Distance for Dry Contact	500M Max.
Wet contact (Sink/Source)	On Voltage Level	+ 1 V_{DC} Max.
	Off Voltage Level	+ 3.5 V_{DC} ~ + 30 V_{DC}
Counters	Channels	2
	Max. Count	4,294,967,285 (32-bit)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Oversvoltage Protection	30 V_{DC}	
Digital Output		
Output Channels	2	
Type	Isolated Open Collector (Sink)	
Max. Load Current	700 mA/Channel	
Load Voltage	+ 5 V_{DC} ~ + 50 V_{DC}	
Oversvoltage Protection	60 V_{DC}	
Overload Protection	1.4 A	
Short-circuit Protection	Yes	
Power-on Value	Yes, Programmable	
Safe Value	Yes, Programmable	

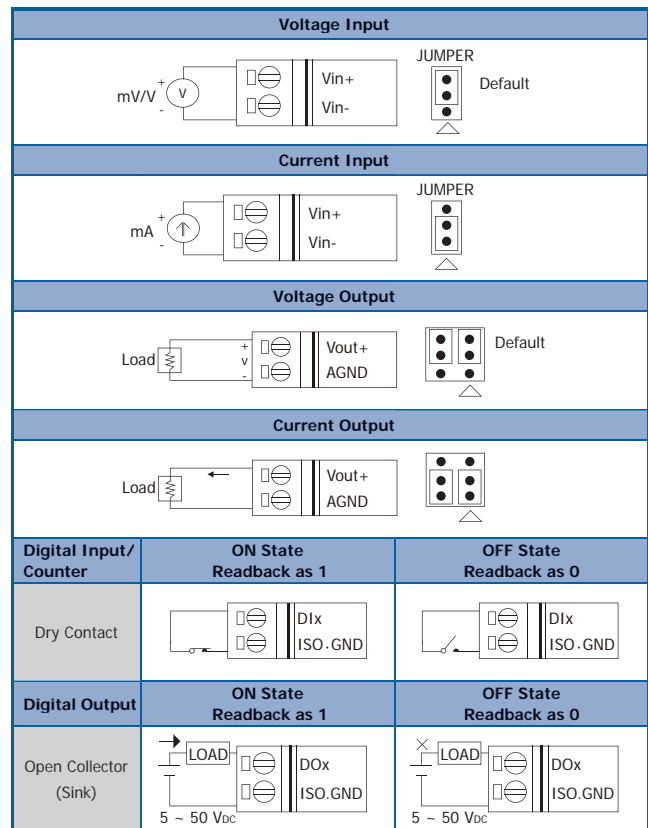
Ordering Information

ET-7026 CR	Multifunction Module (RoHS)
PET-7026 CR	Multifunction PoE Module (RoHS)

Pin Assignments



Wire Connections



Accessories

NS-205 CR	Unmanaged 5-port Industrial Ethernet Switch; requires 24 V_{DC} Input (RoHS)
NS-205PSE CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 48 V_{DC} Input (RoHS)
NS-205PSE-24V CR	Unmanaged Ethernet switch with 4-PoE and 1 RJ45 uplink; requires 24 V_{DC} Input (RoHS)
MDR-20-24 CR	24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
DIN-KA52F-48 CR	48V/0.52A, 25 W Power Supply with DIN-Rail Mounting (RoHS)

Hardware

● WISE-71xx Intelligent I/O Controller

Model	WISE-7105	WISE-7115	WISE-7117	WISE-7118Z	WISE-7119	WISE-7126
OS	MiniOS7					
Built-in Software	WISE Firmware					
CPU	16-bit CPU					
Ethernet Port	10/100 Base-TX with PoE (Power over Ethernet)					
I/O Channel	DI	-	-	-	-	2
	DO	4	-	4	6	4
	AI	8	7	8	10	8
	AO	-	-	-	-	-
Over Voltage Protection	110 V _{Dc} /V _{Ac}	-	240 V _{rms}	240 V _{rms}	240 V _{rms}	240 V _{rms}
Note	* Support Thermistor	* Support RTD	-	* Also Support Thermocouple Input		-

Model	WISE-7144	WISE-7151	WISE-7152	WISE-7160	WISE-7167	
OS	MiniOS7					
Built-in Software	WISE Firmware					
CPU	16-bit CPU					
Ethernet Port	10/100 Base-TX With PoE (Power over Ethernet)					
I/O Channel	DI	8	16	8	6	-
	DO	8 (Sink Type)	-	8 (Source Type)	6 (Power Relay)	8 (Power Relay)
Note	* DI for Sink & Source Type				-	

- WISE-790x Extensible I/O Intelligent Controller
- WISE-4000 SMS Intelligent Controller

Model	WISE-7901(D)	WISE-7902(D)	WISE-4000(D)
OS	MiniOS7		
Built-in Software	WISE Firmware		
CPU	16-bit CPU		
Ethernet Port	10/100 Base-TX with PoE (Power over Ethernet)		10/100 Base-TX
GPRS/GSM	-		GPRS/GSM Quad-band 850/900/1800/1900 MHz
I/O Function	Support ICP DAS I/O expansion board (X-Board) : X107、X109、X110、X111、 X202、X203、X303、X304、 X305、X308、X310、X324	Support ICP DAS FRnet remote I/O modules: FR-2053T、FR-2054T、 FR-2057T	3 Digital inputs、3 Digital outputs & 8 Analog inputs
Note	* WISE-790xD is WISE-790x with LED Display		* WISE-4000D is WISE-4000 with LCD Display

Software

Model	WISE-71xx	WISE-790x(D)	WISE-4000(D)
Rule Configuration Website	Yes	Yes	Yes
I/O Function Supported	Built-in	7901 With X-Board、 7902 With FRnet	Built-in
36 IF-THEN-ELSE Logic Rule Supported	Yes	Yes	Yes
48 Internal Register Supported	Yes	Yes	Yes
12 Timer Supported	Yes	Yes	Yes
12 Email Supported	Yes	Yes	Yes
12 CGI Commands Supported	Yes	Yes	Yes
12 Recipe Supported	Yes	Yes	Yes
8 P2P Supported	Yes	Yes	Yes
Modbus TCP Protocol	Yes	Yes	Yes
12 Schedule Supported	-	Yes	Yes
12 SMS Supported	-	-	Yes